

Notice of Allowability

Application No.

09/672,781

Examiner

Charles Chow

Applicant(s)

CHOI ET AL.

Art Unit

2685

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 7/23/2004.
2. ☒ The allowed claim(s) is/are 14-16, 18 and 20.
3. ☒ The drawings filed on 29 September 2000 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 11/3/2004.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

Detailed Action

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with attorney Carol Drazdick on 11/3/2004.

Claim 14 has been authorized by attorney for the modifications by adding "a dielectric substance placed between the antenna and the battery cell" after the "adjacent to the battery cell", and by adding "in a predetermined area above the dielectric substance and below the upper surface of the battery pack" after the "upper surface of the battery cell".

Claim 14 (modified),

A battery of a mobile phone comprising:

a battery cell;

an antenna electrically connected with a mobile phone main body and implemented at a predetermined position adjacent to the battery cell; a dielectric substance placed between the antenna and the battery cell; and

a battery pack holding the battery cell and the antenna therein, wherein the antenna is formed by a plurality of wires that lie in a plane that extends parallel to an upper surface of the battery cell, in a predetermined area above the dielectric substance and below the upper surface of the battery pack.

Allowable Subject Matter

2. The following is an examiner's statement of reasons for allowance:

Claims 14-16, 18, 20 are allowable over the prior art of record, the prior art fails to teach singly, particularly, or in combination, the subject matter, for a battery of a mobile phone

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comprising a battery cell; an antenna electrically connected with a mobile phone main body and implemented at a predetermined position adjacent to the battery cell; a dielectric substance placed between the antenna and the battery cell; and a battery pack holding the battery cell and the antenna therein, wherein the antenna is formed by a plurality of wires that lie in a plane that extends parallel to an upper surface of the battery cell, in a predetermined area above the dielectric substance and below the upper surface of the battery pack, as shown in the modified independent claim 14 above. The dependent claims are also allowable due to their dependency upon the independent claims.

The closest patent to Llewellyn et al. (US 6,104,920) teaches an antenna arrangements 5 for the cordless radio communication device 1 (Fig. 1) having monopole antenna lead 4 forming a plane in parallel with the plane formed by batteries B1, B2 (Fig. 1, col. 3, line 42 to col. 4, line 36). Llewellyn et al. fail to teach the antenna is formed by plurality of wires that lie in a plane that extends parallel to an upper surface of the battery cell in a predetermined area above the dielectric substance and below the upper surface of the battery pack.

Other prior arts in below has been considered, but they do not teach the above claimed features.

Lauper et al. (US 6,456,039 B1) teaches interchangeable battery package 2 containing a integrated antenna 20 (Fig. 1, col. 2, lines 40-64), with the antenna 20 consisting of a coiled, curled wires located in a plane which is in parallel with the battery top surface when the mobile phone is laid down horizontally such that the antenna 20 is in parallel with the top surface of battery 2 (Fig. 1; col. 2, lines 48-50). Lauper et al. has a later filing date in comparison with appellant's filing data 10/1/1999, because Lauper et al. has a Continuation

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of application of a PCT application which is filed on 6/18/1999 (PCT/CH99/00,266), which is indicated in appellant's amendment, page 2.

Johnson et al. (US 6,181,283 B1) teaches battery 20 located within detachable battery assembly 16 (Fig. 3) of the wireless communication device 12 (title, abstract, Fig. 3; col. 3, line 13 to col. 4, line 19, Fig. 1-3), and the antenna assembly 30 is at a predetermined upper position adjacent to the battery cell 20 (Fig. 3, col. 4, lines 33-45). Johnson does not teach a battery pack holding the battery cell and an antenna which is formed by a plurality of wires that lie in a plane extending parallel to an upper surface of the battery cell.

Miller (US 4,593,409) teaches an antenna 18 (Fig. 1-2) is contained within a removable battery package enclosure 20 for the two way portable transceiver system 10. Miller does not teach a battery pack holding the battery cell and also a antenna which is formed by a plurality of wires that lie in a plane extending parallel to an upper surface of the battery cell.

Moren et al. (US 2002/0000, 940 A1) teaches antenna radiation element 20, for radio communication device, having meander patterns as shown in Fig. 1-4, Fig. 11, [0041], for the improved efficient, small, flat, low cost antenna for a small radio communication device [0004-0007]. Moren et al. do not teaches a battery pack holding the battery cell and an antenna which is formed by a plurality of wires that lie in a plane extending parallel to an upper surface of the battery cell.

Zakman et al. (US 4,903, 326) teaches a battery 102 comprising cell compartment 302 and an antenna area 303 in the upper area above battery cell 302 (Fig. 3-4, col. 1, lines 35-58, col. 2, line 54 to col. 3, line 6). Zakman et al. do not teach a battery pack holding the battery cell and

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also an antenna which is formed by a plurality of wires that lie in a plane extending parallel to an upper surface of the battery cell.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles Chow whose telephone number is (703)-306-5615.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban, can be reached at (703)-305-4385.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

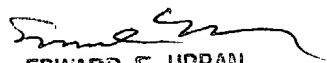
or faxed to: (703) 872-9306 (for Technology Center 2600 only)

Hand-delivered responses should be brought to 220 South 20th Street, Crystal Plaza Two, Lobby, Room 1B03, Arlington, VA 22202 (Customer Window).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Charles Chow C.C.

November 3, 2004.


EDWARD F. URBAN
SUPERVISORY PATENT EXAMINER
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